# Title

*Building a Departmental and Graduate Program Change Model that Increases Cultural Competence and Creates a Graduate Experience that Enhances the Success of Diverse and Inclusive Graduates and Future Faculty*

Department of Applied Ecology and Biology Graduate Program

# Abstract

The Department of Applied Ecology is requesting funds to develop activities to create and sustain a diverse and inclusive culture among faculty mentors and URM and non-URM graduate students. The broad goals of the proposed activities are to enhance communication between mentors and mentees as well as communication between URM and non-URM graduate students. By emphasizing communication, we will create a better sense of community and a peer network, which are often lacking for URM students. A focus on communication will also provide diverse opportunities and venues for articulating expectations of a mentor and a graduate student, which for URM students may be unclear or they are not comfortable asking. A goal is also to provide opportunities for both faculty and URM students to engage in URM programs in their respective professional societies, bring new ideas back for inclusion into the diversity plan, and engage in leadership roles that will enhance their URM mentoring skills and better prepare URM students for faculty roles. To achieve these goals, we propose to: **1)** Develop a **mentor-mentee work/communication styles learning module** into the Biology Graduate Program core course (AEC 502 Introduction to Biological Research) required for all new PhD and MS students in the Biology Graduate Program, and also taken by many students enrolled in the Fisheries, Wildlife and Conservation Biology Graduate Program. **2)** Host a workshop on **how to write and evaluate a job application diversity statement** that will train faculty and graduate students, and that will provide expert knowledge to be integrated as a learning module into the Graduate Program core course (AEC 502 Introduction to Biological Research). **3)** Develop a **peer mentoring program for graduate students** in the Biology Graduate Program and Department of Applied Ecology. **4)** Provide **conference travel funds** for graduate student(s) and/or faculty member(s) **to participant in a conference URM program/event.** These activities will be developed and integrated into the Department of Applied Ecology and its two associated graduate programs over the next two years. The specific activities were selected and designed to be sustained long term by inclusion into the graduate program’s core course that connects diverse faculty and graduate students across multiple departments and three colleges at NC State.

Additionally, the inclusion of these activities into the Department of Applied Ecology’s Diversity Training and Mentoring Plan provides an institutional mechanism for this knowledge and training to be transferred among cohorts of faculty and graduate students. Furthermore, all of the activities build an experiential set of skills that can be further developed by faculty as well as by graduate students in their future careers as faculty.

# Description of proposed activities

1. Mentor-Mentee Communication Module. The mentor-mentee communication module will use existing graduate coursework infrastructure (AEC 502 Introduction to Biological Research) to develop better communication skills and overcome communication barriers between graduate students and mentors for **all incoming graduate students in the Biology Graduate Program**

**and the Department of Applied Ecology**. Specifically, the mentor-mentee work/communication styles module will include readings, discussion among the students in the class, and a hands-on worksheet exercise on **work and communication styles** that is completed both by the graduate student and their mentor, then shared and discussed jointly between student and mentor, as well as shared and discussed among the students in the course. This exercise is based on a presentation by Dr. Sharon L. Milgram, Director of the NIH Office of Intramural Training & Education (OITE) that was given at the Spring AGEP-NC meeting. During the 2019-2020 academic year, we propose to bring Dr. Milgram (or similar type of expert) back to campus to give a workshop to faculty and also one to students as we thought it was highly effective, and the in-class module we will offer in AEC 502 only touches upon a few communication/work style issues. The AEC 502 module is planned for our Fall 2019 offering with the in-class discussion on November 6, 2019. We will allow opportunities for faculty and student input using a survey, and we will refine the module as needed for our Spring 2020 offering of AEC 502 and based on our interaction with Dr. Milgram (or other speaker). Moving forward, we will include this module in each offering of the course with additional refinement as needed.

1. Writing and evaluating a job application diversity statement. Diversity statements are now becoming standard in many academic positions. For example, many of the University of California schools now require diversity statements for all faculty applications, and we have had discussions about a similar requirement on search committees we have served on. Although workshops on writing Research and Teaching Statements for faculty positions are common, less common are workshops that explicitly address how to write a clear and effective Diversity Statement for job applications. It is important to note that these statements are not about an applicant’s personal diversity but how the applicant will contribute to creating a diverse academic community, and how they will help students from diverse backgrounds succeed. We propose to first get a subset of interested faculty, the DGP, and Department Head trained in writing diversity statements. We will then host a yearly workshop for URM and non-URM students in how to write diversity statements for job applications. By training multiple faculty in writing successful diversity statements, we will ensure we always have an available pool of faculty to draw from to teach and moderate the workshop.
2. Peer mentor network program. A common concern raised by both URM and non-URM students in Applied Ecology and the Biology Graduate Program is a lack of community. This feeling of a lack of community seems to be felt more strongly by students in smaller labs who don’t have a set of more senior peers to interact with and guide them. The core course, AEC 502, was created approximately 4 years ago as a way to generate more community among the incoming cohort of students, and we think that is helping. However, this core course only connects students to students in their cohort and not to more senior students outside their lab, department, or building who could help provide advice, and offer different perspectives, experiences, and diversity. Thus, to fill this gap, we will create a peer mentoring network for our population of students, both URM and non-URM students. We will solicit volunteers and will also encourage participation from our senior graduate students in the program, as well as participants from the incoming cohort of students. We will not make participation mandatory, but we will encourage all incoming students to participate, and we think they will want to based on feedback at a Graduate Student Association meeting in Spring 2019 that the DGP held. The

senior students will read a series of readings on how to be an effective mentor and potential topics that could be discussed between peers, and we will encourage interaction among mentors and mentees by offering funds for peer mentors to take mentees for coffee/tea/snacks in a neutral, non-departmental setting where they can engage in discussions. We hope they will meet 2-4 times per year, but they can meet more often as well and as the need arises. We will assign PhD students as “senior” if they have passed their qualifying exams, and “junior” if they are incoming students or have not passed their exams yet. This will allow both first and second year students to participate in this first year of the peer mentoring program. Students’ roles in the network will change as they progress through their graduate career, switching from mentee to mentor. We will offer initial and final surveys throughout the first two years of the program to assess meeting frequency and also to assess the range of topics discussed and any new materials needed in mentor training.

1. Attending URM conferences and/or participation in conference-specific URM events/groups. We will offer our current URM and non-URM graduate students and faculty the opportunity to attend URM specific conferences (e.g., SACNAS, ABRCMS) or scientific conferences that have diversity enhancement events/groups (e.g., ESA.org SEEDS), and to report back to the faculty and graduate students. This will expand our network outside of NC State and also bring new ideas into our institutional change model. Students will be required to fill out a small application that indicates the name of the conference, the specific event/workshop/mixer they will attend at the conference, how they will transfer the knowledge back to the faculty and graduate students, and relevant details on how the conference and URM event/workshop/mixer will expand their knowledge of and role in promoting diversity and inclusivity, and also how attending the conference more generally will promote their graduate and/or faculty careers. Prior to the announcement of these funds, we will host a small workshop for all of our students on what types of conferences/events they could attend and also tips on how to write their applications.

Attending a conference can be an important growth promoter in a graduate student’s career, but many students including URM students, don’t see the benefits of attending a conference or don’t know they should be attending conferences. In particular, conference URM programs can serve as an important community outside NC State for URM faculty and students (e.g. ESA.org SEEDS, freshwater-science.org INSTARS). These funds should encourage our students to increase their network of peers outside of NC State, engage in conferences and especially at URM events, which will be important experiences for both URM and non-URM faculty and students in order to build and sustain a diverse and inclusive successful graduate program and faculty.

# Timeline of activities

1. Mentor-mentee communication module. Fall 2019 start the module in AEC 502, with refinement in the AEC 502 spring offering. Spring 2020 invite speaker to campus for a workshop.
2. Diversity statement workshop. Fall 2019 gain faculty training in how to offer the workshops. Spring (April) 2020 offer our first workshop.
3. Peer mentor network program. Fall 2019 meeting and mixer with current and new students about the network, assign pairs, and relevant readings. January 2020 start the network with meeting encouragement. Continue to May 2021 and beyond.
4. URM conference and/or participation conference-specific URM events. Fall 2019 host a meeting for students and faculty about the funds and application. Start accepting applications immediately, with a rolling deadline until all funds are used or May 31, 2021.
5. Submit detailed report of project to date outcomes (June 2020 and June 2021).